

Aviation News

McGraw-Hill Publishing Company, Inc.

SEPTEMBER 8, 1943 50 CENTS



Lawrence D. Bell, president and general manager of Bell Aircraft Corporation, who was elected president last week of the Aircraft War Production Council, East Coast. On Sept. 1 he also assumed the position of president of the National Aircraft War Production Council.

Big Bomber Production Soars
August output of four-engined bombardment craft is three times the monthly rate of production at the beginning of the year.



August Plane Output Sets Record
Latest report of last month's warplane turn-out indicates previous all time high of 7,373 is exceeded by considerable number.



Hughes Shuffles Cargo Plane Men
Edward G. Bern resigns as chief of eight-engine wooden cargo plane project, followed by his aide. Both firms deny Kaiser-Hughes split.



National Service Act Seen
Close observers in Washington forecast a National Service Act and believe "educational" campaign is already underway to prepare the public.



Action Hinted on Foreign Routes
CAB is asking for data on the international air routes most likely to be required first, and hints that some action may precede the Armistice.



CAB Defines Jurisdiction
Clarifies its authority over airlines which are owned or controlled by other types of carriers, specifically commenting on Northeast case.



3 Lines' Financial Reports Analyzed
Financial commentator compares record for first six months of the year, made by the three transcontinental lines, American, TWA and United, with a year ago.

Washington Observer

AIR POWER—For a man who has had such opportunities to observe the potency of air power at close range, Brendan Bracken, British Minister of Information, shows a strange reaction. He actually discounts air power as a decisive factor in winning the war. He considered that "some enthusiastic and glibly earnest" believe the Axis can be reduced by bombing. But his attitude at a Washington news conference was simply lake-water on air power possibilities.

FLYING BOATS VS. LAND BASED PLANES—This perennial argument got a little new fuel in scraps of information from the confidential report or cargo planes made by Grover Loening for top war production officials. Reports that he urged large production of the Martin Mary were

considerable reason the number of aircraft lost in battle, accident and obsolescence was held up by his information department so that it would not coincide with Nelson's monthly production report. And incidentally the Office of War Information has completed its report on our combat planes. Release was expected by this time, but the report is getting steadily passed over from the Army.

MANAGEMENT ON THE SPOT? Top WPA officials believe that the real test of management's war contribution is now coming up, particularly in regards manpower. They contend that there must be more efficiency, better utilization of labor and—more and harder work by labor. They are privately expressing concern that management, having done a magnificent job up to this time, may spoil some of the record by stumbling on production coming down the home stretch. They are concerned, too, they say, over indications that management believes the Army and Navy has more than enough equipment in some categories. That, say these WPA officials, is for the military to determine. In this connection, airplane attrition has not been nearly as high as originally estimated.

REORGANIZATION—It's a dull week in Washington when a government agency is not being reorganized. Latest reports concern a merger of several agencies to form an over-all super agency to handle all phases of economic warfare. Of course, many of these things die aborning, so don't plan on this one.

REMOVED, HOWEVER, is a foreign economic setup which would include parts of Lord-Louis, Office of Strategic Services, Office of Economic Warfare, Gov. Lehman's group, Office of War Information, Overseas Service, certain State Department divisions and what is left of domestic OWI. Incidentally, Elmer Davis has denied persistent reports that he was going to resign. Cheers he can't.

BRITISH MISSION—There have been recurrent reports that a British mission is circulating around town on the trail of post-war airline equipment, etc. Everybody shies away from the question. Some aviation people in the capital are of the opinion, however, that there may be a few such persons, operating semi-officially, in the Churchill entourage. Of course there are many British missions in Washington including the British Ministry of War Transport, which may be thinking about post-war aviation problems from time to time.

only half-true. Production of flying boats was urged along with recommendations for increased production of several other types. Replacement of planes taken from the airlines by the Army also was advocated.

Gleason L. Martin, of course, has long been a leading advocate of the flying boat. On his side are the engineers who maintain that the landing gear on large land-based planes becomes so heavy that operating efficiency goes down. Land-based plane people hold, on the other hand, that the hull of the flying boat reduces operating efficiency. Another argument recently has been advanced by the flying boat people—a psychological one. It is that passengers flying over water have a greater sense of security if they know their airplane can land in water. The land-based plane people say this argument doesn't hold in view of the daily transatlantic trips being made, not only by experienced aviators, but by passengers of great prominence whose safety and security is vital.

COMBAT PLANES—This scheme expected from WPA Chairman Donald Nelson showing that our combat plane production exceeds by a

Vickers Hydraulic Equipment is used on many of the most modern airplanes. The Lockheed "Constellation" Transport Illustrated here is representative.

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THE ability to get things from where they are made to where they are needed has been the key to our success in this War. Transportation will play an equally important part in building the Peace to come. The shadows of progress are again lengthening and pointing to air transport as the future's answer to local and World Commerce.

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Volume 1 • Number 6

Aviation News

McGraw-Hill Publishing Co., Inc.

September 8, 1943

CAB Defines Its Control Over Lines Owned by Ground Carriers

Holds jurisdiction only if stock ownership has increased since passage of Civil Aeronautics Act.

The Civil Aeronautics Board has held that in a control relationship involving an air carrier and other carriers created before the Civil Aeronautics Act became law it has jurisdiction only where control by the latter has increased since the Act was approved.

Policy Established.—The principle was established in an opinion in which the Board found it unnecessary to pass on applications by the Boston and Maine Railroad and Maine Central Railroad company requesting it to find they had not acquired control of Northeast Airlines since the Act became law, or approve such control if it was found to have been acquired since the date of the act.

Board.—The board concluded that the railroad group, in which it included the Central Vermont Railroad, now controls Northeast, but dismissed the claims because the control has not increased since the Act became effective in 1938. Central Vermont, while not a party to the proceeding, shares 48 percent of Northeast's stock with the other railroads and has always voted its stock with the applicants on every major issue which has arisen. The Board found.

Northeast a few days later petitioned for permission to intervene in the case which it requested be reopened and reconsidered.

Jurisdiction.—The board stated in its opinion that "while we do not believe that Congress intended us to increase jurisdiction over a control relationship created prior to the effective date of the Civil Aeronautics Act and content unchanged from that date forward, we do believe that we possess jurisdiction in a case where the extent or effectiveness of control has increased."

Control.—"The number of powers and the degree of influence which the controller held on the effective

date of the Act must be deemed approved by Congress, but a subsequent increase in the number of powers, or a strengthening of influence, does not in our opinion share this immunity. This is particularly true in a situation where the control at the time Congress acted was only partial, but complete after that time. And in the event of a change in control whereby different or other common carriers acquired controlling interests in an airline, this change would, of course, be subject to our approval."

Conclusion.—It cited an Air Transport Association memorandum urging it to take the position that any substantial change in the control relation after the Act became law required board approval. This contention was agreed with as it related to increase in the extent or effectiveness of control, but the board did not concur that a decrease in control would give it jurisdiction.

Public Interest.—In line with views previously expressed in 1942, in the

American Export Lines control case, the board declared that "Congressional action clearly indicates a conclusion that the public interest requires that the various forms of transportation be kept distinct, so that each can operate in its own sphere independently of the others. We must therefore scrutinize carefully each situation in which there exists a relationship between an air carrier and another common carrier."

Buy Air Shares.—Northeast's petition pointed out that on Aug. 23, in a sale prepared for considerably earlier than that date, it disposed of 298,889 shares of additional stock. The railroad group could have purchased 10,000 shares of the new issue, which would have maintained the 40 percent ownership. On the contrary, the airline said, Boston and Maine and Maine Central elected to purchase only the former stockholdings of the Central Vermont Airways, subsidiary of the Central Vermont Railway, and an additional 10,000 shares of the new stock, as they now own a total of 188,665 shares. The line contended that this reduced the railroad ownership from 60 to 30 percent, and asked that the Board determine that the railroads do not and cannot control Northeast.

The board's decision also was noted

Mustang the World's Fastest?

For some time the P-51 Mustang has been claimed as the fastest airplane in the world. The top speed of this remarkable all-wood reconnaissance-bomber-fighter has never been released, but it is undoubtedly well over 400 mph, possibly 525 mph in its unarmed photographic version.

The technical editor of The Aeroplane, London, in an analysis of the P-51 Thunderbolt fighter, gave a speed of 428 mph at 35,000 ft. Navy's new fighter, the Grumman F6F Hellcat, powered with the same engine and some

2,000 lb. lighter than the P-51, should have a high top speed as its best attribute. The improved Lightning is up in that same bracket somewhere. All of these fighters would crowd the Mustang for the title.

The new Mustang, however, has been reported as considerably faster than any of these speeds so far mentioned. If this is substantiated by consistent tests, as appears likely, this will be the fastest aircraft in the world's fastest airplane. It still leaves the Mustang as the world's fastest biplane in operation. NAVIGATOR

by the petitioner as having "serious consequences" in presentation of its case in connection with hearings in Boston-New York route applications in New York Sept. 8, in which Northwest is one of several applicants.

Northwest Control—"In view of the determination of railroad control," the petition said, "efforts by opposing interests undoubtedly will be made to force Passenger in a position where it must defend its right to the issuance of a certificate, since it has been stipulated to be rail-controlled." Northwest described it as "totally unnecessary" to require it to maintain such a position "with the manifest burden attendant thereto in view of changed conditions."

It asked that an order finding the railroads do not and cannot control Northwest be entered on or before Sept. 3, and requested hearing, if oral testimony is desired.

3 Battle-Scarred Marauders on Tour

Battle planes, back from Sicilian campaign, making circuit with their crews.

Three battle-scarred Martin Marauders, with their veteran crews, just returned from Sicily, are touring war plants and Army training installations.

Start at Marlin—The tour started with ceremonies at The Glenn L. Martin plant at Baltimore. All 38 of the aircraft wear the air medal and many of them hold higher decorations. The planes have completed nearly 150 missions in the battles where they flew home from the Mediterranean area.



SHOWS BRITISH CONSTRUCTION METHOD:

This new photo from Victory Aircraft, Toronto, shows section construction of the top fuselage of the British 4-engine Lancaster. No sections are larger than will

Bell Heads National And Eastern Councils

Success: Cohn, as president of air-line-wide group meeting planned.

Lawrence D. Bell, president of Bell Aircraft Corp., was elected president of the Aircraft War Production Council, East Coast, last week, and also assumes the presidency of the National Aircraft War Production Council. His successor is Currier Ward, president of Fairchild Engine and Airplane Corp., on the East Coast council and LaMotte Cohn, Northrop Aircraft, Inc., as national president.

L. C. Gend, vice-president of General Motors Corp., and general manager of its Eastern Aircraft Division becomes vice-president of the eastern council.

East & West Meet—A joint meeting of the directors of both East and West Coast councils will be held in New York in late October, the presidents of the eight leading West Coast aircraft companies retaining the vice-man post last April by East Coast presidents.

Other officers of the East Coast council are: Ken Elington, secretary, and Francis T. Boyd, assistant treasurer. C. M. Vandenberg is general manager.

Chamber Members Voting On Plan

Reorganization proposal being considered by mail ballots.

The Board of Governors of the Aeronautical Chamber of Commerce at a meeting in Washington Aug. 31 selected a mail ballot of Chamber

members—there are more than 260—and a proposed reorganization plan designed to make the trade association a more vocal and potent force in all matters affecting the aircraft manufacturing industry.

Revitalization—A special committee which has been working on the revitalization program reported to the Board which was understood to have approved in general the proposals submitted. These plans call for reorganization of the public relations department and the selection of an aggressive administrator with a knowledge of the industry and the workings of Washington by-laws, as the executive head. The presidency of the Chamber would rest with an industry executive. The post is now held by James P. Murray, Boeing vice-president and eastern representative.

Deadlines—With the return of the mail ballots, on which there is a Sept. 30 deadline, it was expected that the Board of Governors will call a special meeting of the membership, such a meeting being necessary to make required changes in the articles of incorporation and the by-laws to make the new program effective.

WPB Seeking Cut In Plastics Uses

New committee formed to encourage use of other materials.

Plastic, long thought of as an convenient substitute for vital metals and woods, have now entered the critical list ahead of secondary sheet aluminum and plywood and WPB officials are seeking to prevent substitution except where it increases performance by a new group, the

"Red Use Committee for Plastics" in the Chemicals Division.

Vital Functions—Only three reasons for substitution of plastics in aircraft are set forth by the committee chairman, Ward Jackson, aircraft consultant for the division: (1) If it is indispensable to operation or performance of a plane; (2) if it saves weight; (3) if the size saves man-hours in production.

"Loss of war functions cannot be continued, and steps have been taken to advise the manufacturers on new uses before considerable effort has been expended," the committee said in its formation order.

Northrop Producing Secret Warplane Type

Cohn alludes to new design as revealing shift-over in operations.

First open reference to one of the nation's new super-secret airplanes was made by officials of Northrop Aircraft, Inc., producers of the controversial "wing wing," when La Motte T. Cohn, general manager of the firm, disclosed a shift-over in production to a "new Northrop designed airplane with many new tactical features."



AAF DEVELOPS A PROP ICER:

Engineers at the AAF Material Command, Wright Field, have devised this outboard on a Lancaster to produce formations of ice on whirling propeller blades while the plane is in flight. Water stored in tanks behind the bomb-bay is then sprayed into the M-2 propeller. This makes possible study of ice formations at high altitudes which otherwise could rarely be observed. Camera, installed inside plane, is aimed at prop through specially built window, its shutter synchronized with prop speed to take detailed photos of formations and rapidly with which ice builds up and is thrown off.

Best Output Quotas—Cohn, in reporting that Northrop was better production schedules, said that during June, July and August, their assembly lines had been changed over from production of the A-31 dive bomber to the new plane. He added that Northrop was delivering this new type plane to the Army on schedule.

Critics Answered—He took occasion to answer critics of lagging production, pointing out that the manufacture of a two- or three-year-old airplane in increasing volume presents no great difficulties provided there is an adequate manpower supply and materials now through on schedule.

Production — Research — Cohn pointed out that entirely different problems were involved in stopping production schedules and continuing experiments on testing models while engineering and setting up for new types. He emphasized that the aircraft industry is the only one in which production and research are indissolubly linked.

He said that hundreds of thousands of man-hours of production layout, tooling and engineering are involved in getting into production of a new airplane, designed to surpass anything in the use of its particular type.

"Dreadful Type"—The executive disclosed no details of the new airplane except to label it a "new and dreadful type."

Cohn reported that in the Northrop fiscal year which ended July 31, "net deliveries amounted to approximately \$70,000,000, an increase of more than 100 percent over the previous year's \$22,000,000."

New Records in '46—"From here on," he said, "the schedule on our new Northrop production model shows up so that in the opening year we expect to reach much higher production peaks."

Post-War Airline "Romance" Decried

PCA President says wars will be needed to set up world system.

The public's theories that airlines will be running fast, huge cargo ships at drastically reduced rates immediately after the war or establishing transoceanic super-services, were decried by C. Redell Mays, Pennsylvania's first Airline president, at a Kew-Forest Club luncheon in Washington last week.

Nothing New—"Absolutely nothing new in the way of planes has come out of this war," said Mays.

fit on the small 30-ft. freight nose of British railcoach. All parts of the Canadian craft are interchangeable with those built in England.



MARAUDER BATTERS NAZI GLIDER:

A great German ME 323 power glider is destroyed by a stream of cannon shells just before being destroyed by a Martin Marauder of the RAF near Cap Corbi. This picture, considered by the British Information Services one of the war's most remarkable, suggests that the glider was a transport loaded with troops, as enemy guns were fired at the attacking Marauder from the plane's struts.

Interest in Future Airports Growing

Administrator Stanton reports national concern for potential problems at commercial bases.

A growing interest in airport development, manifested by alert state and municipal aviation officials, in paralleling the increasing coordination being given post-war flying prospects in the operating end of the aviation industry.

This interest was noted by Charles I. Stanton, administrator of the Civil Aeronautics Administration, at the recent Midwest Global Air Conference at St. Paul.

Local Airports First—The conference, parenthetically, did not devote much attention to global expansion, and Stanton, who discussed the airport situation at length in an address before the meeting. Twenty-one states were represented among the 400 who attended, and state aviation commissions as far away as Tennessee

and Louisiana sent delegates. Mayors and city engineers were prominent.

Expansion Projects—Attention focused, instead, on expansion problems for municipal airports in actualities entanglements of extension of existing airline routes and prospective feeder and pickup services. A constant question was the one on financing—whether the municipalities could look forward to state or Federal aid, or must finance their own development of landing areas to take care of the expected increase in air traffic.

Block Mail—The question followed the line set out in the many requests for information. The administrator said the CAA has received from all over the nation. His interrogations wanted to know how large airports should be for various size towns—whether they should be laid out on the scale of the city or might be constructed on a smaller field to which more land might be added. Frequently he was asked: "how fancy they should be to start."

Location—Gordon Stanton answered that a municipal center of far importance should select an airport site that could be developed extensively, though initially it need not be built as satisfactorily as the immediate requirements. For secondary airports in the biggest cities, he suggested planning for Class 2 types, located with a view to population concentration. Small towns should develop their airports, he suggested, with an eye to accommodating feeder lines.

Highway Pattern—In his prepared address, Stanton suggested that the pattern for the nation's airport development might well emulate the federal and highway program. He told the conference that the field will provide a "splendid chance for the federal government to prove its good-will by establishing a policy which for more than 20 years has proved its practicability in the field of highways."

Three Airport Grants

WPB remitted three CAA airport projects last week. One airport at Alford, N. D., has been permitted to spend \$284,000 on an extension of runways and existing facilities. At Grand Rapids, N. D., \$344,669 will complete an airport started by WPA. Seven hundred thousand dollars will be made available for a municipal airport at Burlington, Ia.

All these projects must be requested by the ARND or the Navy

Shadle Calls for Uniform State Laws

CAA General Counsel says amount of aviation as insurance agency must be determined.

Boasting state aviation laws, says Webb Shadle, general counsel for the Civil Aeronautics Administration, must yield to uniformity of aviation as to aviation.

Even a "bad body of law" if uniform, would "remove conflicts and the air carriers would know the extent to expect." But, he pointed out, a uniform state sales act has been adopted by only 30 states since its submission in 1907.

Insurance—Shadle discussed aviation insurance in the light of pending legislation before the American Bar Association at Chicago.

He declared it "hard to suppose that all the carriers can insure against principal risks and the insurance carried is financially sound, and the machinery for covering risks and meeting claims functions, then, to that extent, the growth and development of air transportation will be secured."

Revolving Fund—He predicted Congress would consider only the insurance investigative and reporting procedure set forth in Convention Point No. 3 of the Law bill to amend the Civil Aeronautics Act, still in the House Judiciary and Foreign Commerce Committees, rather than act on another bill introduced by the California Democrats to provide for

an anti-war risk insurance from a government revolving fund.

Interstate or Interstate—One thing must be determined, Shadle told the lawyers, before any nationwide liability agreement can become effective.

"The states and the federal government," he said, "must decide whether aviation shall remain part interstate and part interstate, or become all interstate." The government now has interstate jurisdiction.

Defines Air Navigation—Here again he referred to the latest draft of the Lee bill, which would define "air navigation" as the operation or navigation of aircraft upon any airport in the United States or in the airspace over the United States.

Prohibits Restriction—He cited a section requiring that legislation of air navigation be as nearly uniform as possible throughout the nation, prohibiting any state from imposition of regulations which would constitute a burden on "air navigation" without consent of the Congress.

First or Second—On the action of Congress, he said, "hinges, in no small measure, the acceptance or declaration of aviation."

Shadle Problem—He concluded his address with these predictions. That the federal government will extreme jurisdiction over the airspace of the United States; that uniform liability will be established for air carriers; that therefore there should be no necessity for the federal government to enter the aviation insurance business, where it is domestic companies in insurance.

TELLING THE WORLD

Effective November 1 advertising for Transcontinental & Western Air, Inc., will be handled by Arthur Kuddler, Inc.

Fourth advertisement in the current campaign of the Licensing Division, Aviation Corp., is built around a "Secret Weapons" theme (American monthly). Copy has been this month in 13 newspapers in three Sunday magazine sections and The Pathfinder. McCann-Erickson is the agency.

Howard Aircraft Corp. of Chicago and St. Charles, Ill., is planning an immediate promotional campaign to familiarize more people with its name and products. One basic feature behind this campaign is that available labor in adjacent territory has been absorbed and the company is forced to go further afield for additional employees. Another is the desire to help in its large list of subsidiaries.

Executive of C. Vogel, account executive at Bruckel-Klein-Youngman & Farn, will handle the campaign. Howard Aircraft is a prime contractor for Army & Navy and has underway a new type of amphibious plane which will be produced for the Navy at the St. Charles plant.

At the Kellert Aircraft plants any employee who has his picture taken for their house organ, Kellert News, is presented with a pair of the picture in a proper album frame. He is able to be able to stand up on a table or mantle. Opposite the picture is the following inscription: "With sincere appreciation of the job you are doing to speed America's Victory."

Air Express Marks 16th Anniversary

September 1 marked the 16th anniversary of commercial air express with the air express service growing from 17,000 shipments in 1926 to more than 1,400,000 shipments last year.

Today's inter-city schedules are twice as fast as those 16 years ago, while rates are one-third what they were in 1927.

Intercontinental Air Express—Flows between the 38 U. S. and Canadian airport cities, and Central and South American, Mexican, Hawaiian and Alaskan points, the total was 67,600 shipments in the first six months of the year, 8,865 shipments more than last year.



NEW FIRING RANGE AT WRIGHT FIELD

Captured 35-caliber enemy machine gun bullets as well as 37-mm. German shells flying into the huge new armament firing range at Wright Field. At the end of the range, about a 100-ft. high, concrete Is the 250-ft. foot backstop. An Army bomber is prepared to drop a round for the first firing of its nose gun, while at the right, a top turret, mounted on a track, aims its guns at a cleanup target.

COMMENTARY

U.S. Leads World in Radial Engines; New V-Type Liquid Designs Near

Navigator, in review of Allied and Axis power plants, warns of advanced developments in German craft

Announcement that the new type Rolls-Royce Merlin aircraft engine has been in production for several months at the Packard Motor Car Co.'s plant and is being used to power the new model of the P-51B Mustang fighter is a reminder that in a combat plane the engine is the prime consideration. In the race to attain and hold air supremacy how does America stand today?

Air-cooled Leaders—In the field of air-cooled radial engines there is no question anywhere that the country leads the parade. The Pratt & Whitney R-2800 or Double Wasp was the first 18-cylinder 2,800 hp engine to reach quantity production anywhere.

It powers a great variety of Army and Navy fighters, bombers and transports, including the Navy's Vought F4U Corsair (also built by Goodyear and Brewster). Grumman's new F6F Hellcat, full performance data on which promises to be sensational and Army Air Forces' high-flying Republic P-47 Thunderbolt, Martin B-26 Marauder and Vega Ventura (B-26, P-47) fast, powerful two-engine bombers and the C-46 Curtiss Commando which carries a heavier load at a greater speed up to 1,340-mph. tops than any other two-engine transport.

16-Cylinder Job—Wright Aeronautical's R-3350 Duplex Cyclone is a somewhat larger 16-cylinder job and has been used to date on Consolidated's model 31 flying boat, the Martin B-26, and Army's Douglas B-19 and Lockheed Constellation. There has been renewed interest in the first two of these ships as cargo-transports in the Navy's far-reaching Pacific operations.

In England the 15-cylinder Bristol Centaurus has been under development for some years, but no news has broken as to its use in any bomber or transport to date, although the 14-cylinder Hercules has been successfully used in many of Britain's best bombers and fighters,

including the Stirling, Wellington and Beaufighter.

German Version—The same is largely true of Germany's B.M.W. 801, an 18-cylinder version of the highly efficient B.M.W. 801 which powers the crack Focke-Wulf 190 fighter, the Dornier 217-E-1, bomber, the newest model of the versatile Junkers 88 day-and-night fighter-bomber. Giving this formidable ship sharply improved performance above 30,000 ft., and the Junkers 200 heavy transport. This 14-cylinder engine is roughly equivalent to Wright's R-2800. Daimler-Benz, both rating at about 1,500 hp for take-off and 1,400 for operations.

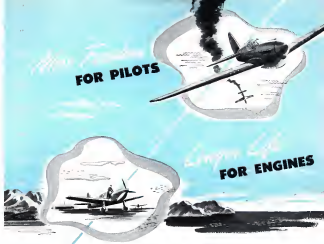


U.S. BULLETS RIDDLE AIRCRAFT:

American fighter planes are being piddled with bullets from American guns at the Wright Field aviation laboratory, to test the effectiveness of concealed armor plates. The planes, which have been subjected after crashes to severe air targets, are subjected to heavy firing ground tests from various caliber guns and aerial cannons. The results reveal to designers armor, or placing of additional armor. About Testhouse C. M. Brown examines bullet strikes in a P-39 Airacobra assigned to target work after a crash.

The 18-cylinder BMW is reported as powering an advanced Focke-Wulf 280, and Do-217 E 3 both of which have flown, but neither reported as in combat operation. Britain's 24-cylinder 31-shaped liquid-cooled Napier Sabre, with sleeve valves, is a distinctive job. Rated at 2,600 hp for take-off, 2,000 operational, it powers the heavy Typhoon fighter.

Liquid-Cooled Progress—There is no doubt that this country's success with air-cooled radials allowed us to fall a bit behind in developing the V-type liquid-cooled engines. Not so far as is commonly supposed, however. While Germany was merely working along with their inverted V-12 Daimler (or Mercedes) — Benz, D12-600 which came out in 1934 at 550 hp and Britain was developing the Rolls-Royce Merlin V-1288 which topped up 900 hp in 1938, the Army Air Corps had a redesigned version of the Navy Allison V-1710 gain a 50-hp test at 900 hp, an improved model carrying up 1,200 hp in 1939. The existing handful of 150-hp test was not passed until March 1937, installed in the Curtiss XP-40 in 1939 with a 1,890 hp rating, but all early deliveries had to be held back to around 600 hp. Further improvements resulted in a 150-hp test in



Increased Operating Efficiency Through Automatic Engine Control

Alt engine functions up, "Leave the pilot free for fighting." Freedom from the constant manual operation of engine controls, and safer, more efficient engine operation is the purpose of the Simmonds-Holston Automatic Engine Controls.

This outstanding engineering development constitutes an important step toward relieving the pilot of routine, by automatic control of such controls as manifold pressure and mixture, it sets as a third hand for the pilot, giving engine protection and longer life. The sensitive unit maintains a selected setting through varied maneuvers and altitudes, thus eliminating the manual operation of cockpit control and setting more efficient performance.

Proven in service and now in production for the fighting planes of the United Nations are units which provide constant control of manifold pressure (boost) and mixture. With even more far-reaching designs now in the experimental stage, Simmonds offers its services to the industry as headquarters for Automatic Engine Control problems.



The Simmonds-Holston Automatic Engine Control for manifold pressure and mixture points the way to more advanced designs embracing automatic control of propeller speed, spark, and other functions.

"Simmonds Equipment Fits With Every Type of Allied Aircraft"

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Automatic Engine Controls • Fuel-Film Controls • Hydraulic Accessories • Instrument and Computer Air Hydraulic Systems • Chronometric Instruments • Steel Rings • Control and Fuel Pipes and Fittings • Lubricating Oil and Greases

June 1944 with a rating of 1,588 hp. **"Big Al" Allison**—Two years later and these improved engines (known in engineering circles as the "big" Allison, but it is still the same V-1710 externally) are just coming into combat planes, but with a further and most successful feature based in performance, including 2-stage superchargers. If it takes five years to produce a really good airplane, it takes less to squeeze out all the possibilities of a good aircraft engine. There are also great difficulties in hooking two 32-cylinder V's together as in Britain's Volo-Royce X-shaped Vulture (given up), Germany's DB-600, and U. S. Allison equipped V-143B, this is the "big" Allison, announced some months ago as in production and ready for any airplane they want to put it in and turning about 2,560 hp.

Rolls & Packard—The Merlin 12 was in the British fighters, the Hercules which won the battle of Britain, and was more effective at low and medium levels than the current DB-601 in the Me-109E and Bismarck 10. As these engines have fewer cylinders, Rolls came through with the Merlin X and later the XX and 45 for the Hurricane X and Spitfire V, with greatly improved performance beyond 30,000 ft. The big jump came with the 1,800 hp Merlin 60, with 2-stage superchargers, giving the Spitfire IX top performance up to 40,000 ft., and necessitating a 4-blade propeller. This is substantially the engine which Packard is now building for the Mustang, which also is using a 4-blade prop to fully utilize the increased power at altitude.

All this stepped-up horsepower for fighter planes, whether heavier, heavier, more, bigger and better machine-guns and aerial cannon, which is part of the armament to desperate defensive tactics now widely observed in the Luftwaffe. Don't write that off yet. We may be over the hump, but there is a long haul ahead. Incidentally, the DB-series and the Jumo (Junkers Motor Works) have far years used the direct "fuel injection" system instead of the conventional carburetor. Experiments are being done in Britain and in this country, but Anglo-American engineers do not as yet appear to be sold on this development, which they claim has some advantages but also some disadvantages and thus make it impossible to put in production at this time.

Push-Back Power—In the 34-cylinder 1,588 hp. Allison liquid-cooled engine field, Britain has the

P-40's Score

is a recently completed "box area" released by Curtiss-Wright Corp. to show the Allison whittling down of Axis airplanes, the most successful Curtiss-Wright fighters came out as top figures based on 50 recent aerial engagements, in which 497 P-40's employed 1,287 Axis aircraft of all types and all fronts, show the Curtiss fighters' tail of the enemy stands at 13% to 1.

Rolls-Royce Griffon, long under development, mentioned three years ago, but push-back since. Some gas for a reported new Chrysler development, 18-cylinder 2,000 hp super-100 cubic in. etc. This may have been side-tracked in the rush for speed development of what we had, or it may suddenly turn up as an experimental fighter one of three. As these engines have fewer cylinders, Rolls came through with the Merlin X and later the XX and 45 for the Hurricane X and Spitfire V, with greatly improved performance beyond 30,000 ft. The big jump came with the 1,800 hp Merlin 60, with 2-stage superchargers, giving the Spitfire IX top performance up to 40,000 ft., and necessitating a 4-blade propeller. This is substantially the engine which Packard is now building for the Mustang, which also is using a 4-blade prop to fully utilize the increased power at altitude.

AIR-WAR REVIEW—Berlin by item-analysis is the war went into its fifth year. Nuremberg, vital communications center linking to northern Italy, was in ruins and the communications network at the foot of the Italian Alps, a break-neck race to hit all the targets would be leftless.

Surprise Destruction—Lightnings from Northwest Africa caught scores of enemy planes grounded on the runway at Perugia in a surprise low-level attack. The job was completed by Flying Fortress Liberators of the North U. S. Air Force from the Middle East Command criss-crossed the target to rip out the runway parking area.

It should be noted that here, as elsewhere, the enemy's fighter and other defenses were increased.

Greatest Battle Yet—The attack on Nuremberg resulted in what one observer called the obliteration of the target, and involved what may have been one of the greatest air battles yet. Thirty-four of our bombers failed to return.

Increased Tempo—Over 140 Axis fighters in clear target areas with the increased tempo of Allied strategic

war blazes against Axis nerve centers the world over. The 14th has carried out a series of bombing missions against air installations at Canton and Hong Kong. Medium bombers with fighter escort ripped at the airfields at Canton. In the Hong Kong area, Liberators with fighter escort struck at the vital Kowloon area of ports and shipyards. All returned safely.

Axis Supremacy "Over Georgia"—In the South Pacific the end of the war against New Georgia was reported by Gen. MacArthur as what was left of the Japs at Buna-Harlow fell by last under concentrated fire from our air and air. Our heavy bombers pounded the Jap air base of Kabihi on Bougainville Island. Thirty enemy fighters rose to meet them. Fourteen of the enemy were disposed of.

Along the entire widespread front our aerial supremacy continues, in constant pressure, from the Mactan Straits to the Solomon.

Two Bombs—Detailed reports were released on the Berlin raids on August 17 which cost us 59 Flying Fortresses, a record bomber loss for an Allied air operation. At the same time, the Flying Fortresses and their escorts, the Eighth Bombers, the 8th Bomber Command, and one of Germany's most important aircraft factories was destroyed, one which had built and produced more than 1,000 fighters over the next six months.

Solomon's Record Month—Army, Navy and Marine forces in the Solomons have ended their most successful month of air fighting since the Army took over from the Marines on Guadalcanal. They shot down 180 enemy aircraft in August with the loss of only 15. The month's bag included 123 fighters, 30 dive bombers, 18 boat crews and nine medium bombers. The month's activity was marked by the almost complete disappearance of the Japs' heaviest bomber—the Mitsubishi G1—from the area.

Enemy Fighter Output—Reports from British sources say the enemy has recently made strenuous efforts to increase his output of fighter planes and it was estimated he has approximately 1,500 fighters in northwest Germany and France.

NAVIGATION

AIRCRAFT PRODUCTION

Monthly Heavy Bomber Production Triples Rate of 8 Months Ago

August manufacturing survey shows big gains over July in all planes except Willow Run, with national output well over 700.

The aircraft industry in August produced nearly three times as many four-engine bombers as it had produced monthly at the first of the year, according to reports from production centers, a record more remarkable when peacetime production is considered.

Output Keeps Going Up—The production of heavy bombers continues to show a steady trend upward, as does of increased importance in view of recent severe losses over Europe and the sharp increases in the tempo of our bombing operations on all fronts.

Peak in Night—The output of four-engine bombers in well above the 700-a-month announced some time ago and on the way toward the peak and in current schedules which will be reached some time next year. While August production did not reach the August schedule, it reached the goal and was above the peak in the bulk of manufacturing reports were heard from virtually all four-engine bomber makers.

Extra Plants—In connection with production of big bombers, it must be remembered that they are being produced other than in the home plants of the Boeing Flying Fortress and the Consolidated Liberator and that some of these plants are only now actually getting into volume production.

Douglas has added in the Fortress output at Long Beach and is building the Liberator at Tulsa. Vega has made remarkable strides on the B-17 in recent months.

Liberators Doubled—Consolidated's Fort Worth plant has virtually doubled its output of Liberators in recent months and most production experts are optimistic if the manpower problem can be solved. The manpower situation is naturally a vital part of any production picture at this time.

Willow Run Shows—There is one discouraging note in the picture in reports from Detroit, that bomber production at the Willow Run plant

is below previous months. This is partly explained by the fact that Willow Run is producing parts for other plants, but not entirely.

Katy Flashes—In the overall four-engine picture, the number of four-engine planes—patrol bombers—for the Navy has been a minor item. It was understood that the Navy is producing these planes largely for patrol work and not as long-range bombers, leaving that field more or less to the Army. Production of these patrol bombers was reported to have remained small but constant during the past few months.

Record Loss—Our record loss in bombers occurred during the two raids on the Messerschmitt factory at Regensburg and the bombing plant at Schweinfurt. We lost a total of 58. At the same time, we destroyed 367 Nazi fighters, an important whittling down of the Luftwaffe's fighter strength.

New Navy Entries—This takes on added significance in view of new defense methods reported by armies back from German raids in

an effort to spend our stepped-up bombing they tried an experiment of stepping off anti-aircraft over a green area as signal and sending waves of fighters into the air-free from risk. They took some bait, but our planes will be waiting for them if such tactics continue.

Nelson States—In his formal report on production for July, WPA Chairman Donald Nelson said that aircraft and related munitions helped dominate the production field by going 5 percent above the previous month.

Airplane production was 4 percent over the previous month and 142 percent over the same month last year. In pounds, it more than doubled the July, 1942 output.

Increases—Nelson said there was a 15 percent increase in fighters over June, a 13 percent increase in heavy bombers and an 8 percent increase in transports. He noted that tactical planes have been produced in large volume in recent months and are a significant addition to aircraft production, not included in total figures.

U. S. Chamber Starts Surplus Plant Study

Lockheed's Vultee noted on new committee, to meet Sept. 9-10.

The U. S. Chamber of Commerce has announced formation of a special businessmen's committee to study the problems of war surplus plants and supplies. The first step of this group, it is known as

(Then to page 10)



Liberator and Dauntless Shrike Skop 8-24 Liberators are being assembled side by side with Douglas Dauntless A-24 dive bombers in the Tulsa shop of Douglas Aircraft. The unusual picture is one of the few that show two different manufacturers' designs in the same plant.

Aviation—A Progress Report

The Lessons of War Become the Key to a Richer Peace

TUNISIA, PANTELLERIA, SICILY—stepping stones to momentous events! But that is not all. For they spell out across the blue waters of the Muck tennies a pattern of invasion that has progressed far since last summer's first major Commando operation against the French coast.

From Dieppe, you remember, too many of the raiders never got back. But in Tunisia, and on through Sicily, the Allied might played inevitably forward, winning objective after objective at a surprisingly low cost in casualties. Air supremacy over the battlefield? Yes. But we have learned, too, how

to save lives and shorten the war by strategic air bombardment as a prelude to invasion.

For the bombardment plane—rarely seen by the doughboys on the fighting fronts—is destined to save their lives by hundreds of thousands in the decisive attacks that are to come. This fact is confirmed by the cold calculations of the responsible strategists. It will give renewed courage and confidence to every member of the armed forces and of the home fronts throughout the United Nations.

For instance: thorough strategic bombardment of an objective reduces by nearly fifty per cent the surface forces required for invasion. Anticipated losses are reduced from more than fifty per cent of the original ground force to about twenty per cent. Precision bombardment—as used on critical objectives in Rome—reduces this percentage of loss still further when it is followed by offensive action on the ground.

The inference is clear: Effective prosecution of the war will require smaller ground combat forces and much larger air forces than some of our strategists once thought.

Our most urgent need, then, is for ever-mounting fleets of aircraft. And, fortunately, this is just what we are getting. The American aircraft industry now is producing as many airplanes as all the rest of the world combined. In 1938 we made 100 planes a month. Now we make three times that many in a single working day. By the end of 1943, our production rate will be about 10,000 a month.

But at this stage of the war, types of planes are more important than mere numbers. In the early months the program was heavy, and properly so, with single-engine fighters. Then, as training planes accumulated, the emphasis shifted to heavier types. Now we are turning out multi-engine bombers at a rate that is the envy of

the entire world. Some months ago the President revealed that we were manufacturing 500 long-range bombers every month. The figure was conservative even then. And soon we shall be producing planes of this one type at a rate adequate to replace the actual losses of a fleet of at least 1000 American heavy bombers operating as continuously as the weather will permit.

A glimpse of the percentage production may help us still further to evaluate the miraculous achievements of the aviation industry as a whole. It was 89,000,000 in 1941 . . . 291,000,000 in 1942 . . . 911,000,000 in 1943 . . . and 1,417,000,000 in 1944

—if we need it. There you have the magnificent record of the American aircraft manufacturing industry—a monument to the cooperation of industry, labor, government, and to all-out teamwork between the aviation industry and those other industries which have converted their facilities to the manufacture of airplanes.

What of our enemies and our Allies?

German production probably has flattened out at 2500 a month—with downward revision in immediate prospect. Japan may be able to produce as many as 1000 planes a month—until we get our new long-range super-bombers in sufficient numbers to whittle down that figure. Italy may be able to turn out her 500 a month—for a little longer. At best the maximum Axis monthly total is 4000.

Add to our monthly score of nearly 8000, a total of approximately 4000 for Britain, Canada and Russia, and the United Nations score comes to 12,000 monthly. There we have a three to one advantage for our side. And between our own thing production and the brilliant operations of our bomber commands we should soon boost the ratio well above that figure. Therein lies the certainty of continued and growing air superiority over all the far-flung battlefields.

The critics of American airplane quality have been silenced ever since the ratio of many combat losses to our own on bombardment missions supposed four to one. In the Pacific where our heavily armed and armored planes are knocking off the desperately stripped racing cars of the Nipponese, enemy losses often run as high as eight to one or more. In the Mediterranean theater, where the Italians were abandoned by their Allies, the story is much the same. Only in the well-defended homeland of the Nazis do we sometimes dip below the average, but even in those rare instances the ratio is still well in our favor and the effectiveness of our bombardment is adding constantly to our margin.

Behind the production lines the battle of research and design still rages. In many a laboratory night-shift, on many a secret test field, new and terrible surprises for the enemy are in the making. Super-bombers, destined for Tokyo, have long since passed

out of the design stage and the Japanese may learn about them almost any day. New discoveries, designed to sow swift and silent devastation, are farther along than our enemies believe. No longer will fog or storm or night be permitted to fight on the side of our foes.

The men of science who are toiling to broaden the horizon of our knowledge stand today on the threshold of discoveries that have been sought for centuries. New reservoirs of power may soon exert a profound influence in many fields of technology and through them on our way of life.

Once the war is won these new discoveries will be translated into better living. No longer will countless thousands spend their lives within their own communities or countries. New efficiencies in transportation will bring world travel within the reach of many who once had to stay at home. New fast vehicles will navigate the highways as easily and safely as the highways. Already more than a dozen manufacturers of airplanes, ships, automobiles, and electrical equipment are designing, building, or flying rotary-winged aircraft such as the helicopter or autogiro to meet the needs of tomorrow's families. New and safer aircraft of the fixed-wing type are ready for production as soon as materials become available.

The quality that now makes each of our war planes worth to many of those built by our enemies will be translated into the steady reliability demanded by peacetime operation. The devices that seek out and find our enemies behind the veil of fog or darkness will, after the war, reduce weather hazards to the point where they will be no greater in the air than on the ground.

Science and industry will continue to do their jobs and do them well. But if the world is to be made a better place for men to live in, statesmanship must not fail to do its part.

James H. McGraw, Jr.

President, McGraw-Hill Publishing Company, Inc.

the special committee on Unemployment, War Plants and Shipyard Property is being held in Washington on Sept. 8 and 10, to make a preliminary survey of the scope and extent of the problem.

Members of the committee include officers of companies engaged in the production of raw materials, war supplies, industrial machinery and transportation equipment, building and operation of ships, manufacture and distribution of consumer goods, and banking.

✓Voorhes Chairman.—Among the 37 men who have accepted invitations to serve on this group is S. W. Voorhes, staff assistant to the president of Lockheed Aircraft. Voorhes is presently serving as its chairman of the Economic Development Committee set up by the Aeronautical Chamber of Commerce to study

post-war planning. Albert C. Mellon, president of the Hercules Oil Corp., San Francisco, and a vice-president of the U. S. Chamber of Commerce, is chairman.

✓Kaiser Stocks.—Pointing out that the accumulation of excess stocks of some kinds of war material and supplies is inevitable in a highly mechanized war, the Chamber hopes to work out before the close of war the problems of disposition of surplus and the efficient utilization of the great "special-purpose" manufacturing plants.

✓Problems Involved.—All businessmen are invited to bring to the attention of the committee phases of the problems that are of particular concern to them. Communications should be addressed to T. W. Howard, manager of the Chamber's department of manufacturing.

nation-wide inventory of all men employed with Selective Service. This survey is tentatively set for Sept. 16 to 30. It is a major step in the program to draft possible registrants—not occupationally or otherwise deferred—before the scheduled induction of pre-Pearl Harbor fathers on Oct. 1. Most Washington observers believe that Congress will put a stop to that when the legislators go back into session the middle of September.

✓Into Congress' Lap.—And that is a further indication that the whole manpower problem, regardless of announcements from such important people as Assistant President Jimmy Byrnes, will drop into Congress' lap.

✓Detail.—Many Administration leaders look to the Buffalo plan, the so-called Community Leadership plan, as a means of creating National Service, or at least the last step before action for which the nation is not yet prepared.

✓Drastic Action.—At the same time, some such drastic action is needed if the aircraft industry, particularly on the Pacific Coast, is to meet the schedules which have been set.

San Francisco May Get Chinese Plant

San Francisco probably will be the site for the building of Douglas A-30 attack bombers by the government-owned China Aircraft, Inc.

Selection of John A. Comstock as a "neutral" chairman is selected for a committee which represents labor and management. The committee decides just where the available labor in a community shall perform. It analyzes the business of primary industries—those industries producing vital and prime products.

✓Closed Industries.—Government officials are prepared to carry this to the extent that industries not involved in No. 1 vital production will be closed. It means both-banded and it is, but if the War Production Board withholds materials production from any manufacturer it would be difficult for him to perform.

✓Contract Withdrawals.—Another possibility presents itself—the withdrawal of contracts from certain areas in which there are acute shortages. In spite of complaints from such areas the government not only is prepared to do this, but is actually waiting for the opportunity.

✓Investigative.—One objection to the possibility of a National Service Act as seen in the proposal for a



China Aircraft Conference. Col. James Chu of the Chinese Air Force looks over the shoulder of La Col. G. H. McNulty, AAF Materiel Command official, as plans for China Aircraft, Inc., which will be located in California with the aid of Defense Plant Corp.



PRODUCTION OFFICIALS CONFERENCE WITH AAFWC:

Charles E. Wilson, vice-chairman of WPB and chairman of Aircraft Production Board, is shown here with AAFWC and other government officials during a meeting in Los Angeles recently with West Coast aircraft executives, members of the Aircraft War Production Council. Left to right: Brig. Gen. Ben W. Childers, AAF Materiel

Chief Command; Rear Adm. E. M. Pace, Navy Bureau of Aeronautics; Lt. Col. T. C. Calk, president of Northrop Aircraft, Inc.; and AAFWC, Mr. Wilson, Robert P. Patterson, Under-Secretary of War; La. Col. McNulty, War Dept.; and T. P. Wright, director of AAFWC, of the AAF.

Bern Walks Out as Kaiser-Hughes Cargo Plane Project Manager

Kenneth Ridley, Hughes chief engineer, takes helm as announcement reveals Nov. 15 completion date is revised.

By SCHOLEX BANGS

Howard Hughes and Henry J. Kaiser crisscrossed as end to the "family trouble" which threatened their \$10,000,000 "buggy flying boat" project in Culver City, Calif., when they accepted the resignation of the project's top two executives—Edward G. Bern, general manager, and former American Airlines vice-president, and John W. Le Duc, works manager, previously in charge of development of Kaiser Electric Company's war industry plant at St. Louis.

✓Ridley New Chief.—Into the front office, with full charge of the Hughes-Kaiser flying boat project, went Kenneth F. Ridley, chief engi-

neer of Hughes Aircraft Company. Kaiser is understood to have told Hughes that he would be the sportsman-five-manufacturer to carry the project through to completion and that he would leave as Hughes' hands all future determination of operating policy.

There is no indication, however, that Kaiser intends to withdraw completely from the Hughes-Kaiser alliance, as has been widely rumored.

✓Kaiser.—Some of these rumors arose from the evident dissatisfaction on the part of veteran Hughes associates, seen after Le Duc was brought to Culver City a year ago to direct all preparations from ground to factory, and the construction of the first of the three widely heralded, it is instantly removed, eight-engine flying boats. Bern, vice manager for Hughes in Washington for a year and then manager for Consolidated Vultee plants in the East for about a month, went to Culver City as Hughes' general manager about two months ago.

✓Bern Enlaid.—Confounded recently with the prospect of having several departments of the boat project shifted from his control to Ridley, Bern was said to have balked, then resigned. And with him walked Le Duc.

"It was thoroughly sensible,"

Brazil to Build Ranger Engines

Ranger Engine Division at the Fairchild Engine and Airplane Corp. has signed a contract with the Republic of Brazil under which Ranger engines will be built in the South American country to power the Fairchild M-62, a primary trainer identical with the U. S. Army's PT-19, already under production there.

✓Agreement.—Under the agreement, Fabrica Nacional de Motores, the Brazilian government's recently completed engine plant, will produce the six-cylinder Ranger as varied in-line inverted engine, 155 to 200 hp, making use of drawings, manufacturing data, parts, tools and fixtures provided by Fairchild.

Largest Propeller

The world's largest four-blade warplane propeller—a giant, electrically controlled Curtiss hollow wood type developed by Curtiss-Wright, is currently on exhibit at the Museum of Science and Industry in New York City. The propeller, which measures 16 ft. 8 in. in diameter and weighs approximately 800 lb., is said to be produced in one trything yet produced by the enemy.

aid Bess, "and he not exposed my friendship for Howard Hughes nor my interest in the success of the ship."

Streamlined—Rafferty, facing the doubly-difficult job of engineering the big boat and administering all phases of construction, must be plans only minor changes, a "light" amending of engineers and assembly workers manning a staff of 2,300.

Revised Deadline—With the stakes so come the information that the original Defense Plant Corporation deadline of May 15 for completion of the first flying boat is complete.

model for state lead tests, has been "revived." The DPC is putting up \$18,000,000 on a new "class" of ship. It was involved in the "revision" Hughes officials declined to say. The Hughes-Kaiser boat No. 2 is scheduled to follow the state model by three months, and to be test flown at Los Angeles Harbor Boat No. 3 in due three months after No. 2.

Secret Design—Under a shield of secrecy that has kept aircraft leaders opposed to Kaman's big test plan, planning, construction of HRC-1 will through the primary stage. Small sections of plywood parts

are under construction and in a massive, 900-ft. building, jobs are nearing completion for the hull and 120-ft. wings. Visible from nearby highways is a towering plywood midspan of the hull.

Short-Shift Supervision—Hughes, recently occupied with Hughes Aircraft test flights of his latest speed plane, a twin-boom creation that looks like an enlarged P-38, is expected to keep a personal short-shifts watch over HRC-1 progress. Recently, former's assistant project engineer on the Douglas DC-3, has been with Hughes since October 1955.

The NLRB directed that a run-off election be conducted within 30 days among the employees of the Glenn L. Martin Co., Middle River, Md., to determine whether or not they wish to be represented by UAW-CIO as their collective bargaining agent. This is the first run-off election ordered by the board under its new policy, adopted Aug. 23, which is to be followed in cases where the original election is unworkable. The original election resulted as follows: 46.61 percent for the UAW, 11.13 percent for Aircraft Lodge-UMW, 0.9 percent for Middle River Aeronautical Employees Assn. (ind.), and 42.33 percent for the NLRB.

International Assn. of Machinists was notified for production and maintenance employees at El Segundo, Calif., Division of Douglas Aircraft.

OFAA revoked maximum price regulations on aircraft and No. 1 sheet stock inventory (Rev. MPR 338).

New Aircraft Flooring

Glenn Martin Co. says new plastic material increases payload, cut costs

A new lightweight plastic aircraft flooring has been developed by The Glenn L. Martin Co., which will allow additional to payload and effect operating economies of thousands of dollars to airline operators.

Light & Strong—The material used is laminated phenolic strips and the floor weight is about 15 per cent lighter than other types of equal strength.

Revenue-Maker—Martin engineers estimated that over the life of an airplane a pound of weight saved may mean a \$500 in revenues through greater capacity and lower fuel costs.

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only 15 days to file after the proceeding was started, then filed later intervention was not necessary. Adjustment of the time limit to ten days before hearing or prior to pre-hearing conference was expected to alleviate this difficulty. In other instances motions to intervene have been considered.

The method of intervention before a "petition has been to intervene" under the provision, where the regulations formerly referred to "motion for leave to intervene."

Army Base Officers Plead for Air Service

Commanders of 23 fields and depots ask poor mail facilities.

Twenty-three letters from commanding officers at military bases in west central Texas, requesting the military need for air service in that area, have been submitted to the Civil Aeronautics Board by Continental Air Lines. They included appeals from Randolph and Kelly Fields.

Applications—CAL filed the memoranda in support of its amended application for temporary, permanent or limited air service between Hobbs, N. M., and San Antonio, serving also Midland-Odessa, Big



INSIDE A C-47:

This photo shows why the C-47 Liberator Express is not being considered for post-war passenger service. Although a four-engine ship, its fuselage is narrower than a transport. Despite which, it carries more than three times as many passengers as a standard transport. The fuselage is narrower than a transport. Despite which, it carries more than three times as many passengers as a standard transport. The fuselage is narrower than a transport. Despite which, it carries more than three times as many passengers as a standard transport.

FEDERAL DIGEST

WLB Opinion Says Federal Powers Supersede State Wartime Labor Acts

Summary of government actions for the week includes DPC loans, NWLB and NLRB orders, and OPA price regulation.

National War Labor Board has made it clear that war powers of the President and Congress supersede in wartime acts of state legislatures in labor relations matters.

The law of a state which is aimed at inserting conditions in a collective bargaining contract between an employer and the bargaining agent of the employees can be held to interfere with any order of the War Labor Board regulating relations between employer and employee in time of war when the power to make that regulation flows from the war powers of the U. S. and Congress.

Defense Plant Corporation increased contract with Douglas Aircraft Co., Santa Monica, for additional plant facilities costing \$250,000, increasing the company's overall DPC commitment to \$980,000. Douglas will operate the property. Contract of Willys-Overland Motors, Inc., Toledo, was augmented for more equipment at its Blue plant, increasing overall commitment by \$480,000 to \$2,660,000. The company will operate the new facilities.

Equal Pay for Women—The board also ordered unanimously that equal pay be given for women doing work comparable in quality and quantity to work performed by men in a case involving the Colgate Corporation. It said the company's present the minimum rate for women is to be below the minimum rate for men.

National Labor Relations Board's

total employees. William E. Spencer recommended that Thompson Aircraft Products Co., Cleveland and Baid, Ohio, completely discontinue Aircraft Workers Alliance and Brotherhood of Independent Workers as representatives of any employees for the purpose of collective bargaining, and cease giving effect to contract and agreement with those independent union and demand from discouraging membership in the UAW-CIO and International Assn. of Machinists, offer one employee conditional membership with back pay, back pay only to six others, and post compliance notices for 60 days. The trial court also recommended that the individual be held in contempt for interfering in any way with the self-organizational rights of employees of those companies; demand of court order as it alleges that Old Guard Assn. and Social and Recreation Clubs are labor organizations and to so far as it alleged that the companies discriminate against four other employees.

Electrons Directed—Within 30 days of Aug. 21, truck and motorcycle drivers of the Los Angeles Division of the Bureau of Aviation, Ltd., will vote for UAW-CIO, International Assn. of Machinists, or neither. All truckers of Eastern Aircraft General Motors, Torrance, N. M., will vote for or against UAW-CIO, within 30 days of Aug. 18.

TRANSPORT

CAB Simplifies Regulations For New Route Applications

Extends time for filing of interventions but orders separation of petitions for domestic and foreign service.

Civil Aeronautics Board has revamped its economic regulations to aid present and would-be air carriers. It has eliminated the requirement that before be served by route application on all other applicants and certificate holders, and has assumed that responsibility itself.

Maps—Filed with application maps no longer need show existing service by other carriers to points served.

Expenditure—At the same time, the board extended the time for the filing of interventions. Matters to intervene have had to be submitted within 15 days after a proceeding was initiated. Now the board says petitions for leave to intervene must be filed not later than ten days prior to hearing, or before the first pre-hearing conference, if one is held.

One part of the order may end some additional work for applicants. This is the requirement that domestic route applications be filed separately from those for overseas routes.

Revisions—Affecting sections 226.1 and 205.4 of the board's Economic Regulations, revisions were promulgated in an order issued last week effective Aug. 20. A rule of explanation and they were directed upon "in view of special and emergency circumstances." A flood of applications has complicated the work of the board and its committees.

More Work—The growing total also has increased the work of applicants, who under the old regulations were required to serve notice of application or statement to application on all holders of certificates of public convenience and necessity issued by the CAB and on applicants for such certificates, except those relating to Alaska unless that territory was involved.

Notifications—Now the board announces it will notify the public of the filing of applications by posting notice of such in the Secretary's office and making the information

available to the press. The Docket Section will distribute to a mailing list, including existing air carriers and other applicants, description of all applications filed. Those expected to go out about once a week.

Consideration—In separating applications for domestic and foreign air routes, the board explained that such applications might occasionally be considered for hearing. The distinction in filing is being made, board sources say, to limit the volume of material sent the President under Section 601 of the Civil Aeronautics Act.

Overseas or Foreign—This requires, among other things, that "copies of all applications in respect to such (overseas or foreign) certificates and permits shall be transmitted to the President by the Authority before hearing thereon, and all decisions thereon by the Authority shall be submitted to the President before publication thereof."

Many have been separating their applications voluntarily in this regard, but others, in filing for overseas operations, have incorporated domestic routes. The board said that such applications will benefit applicants. The board retained the requirement that such carriers be in service approximately 100 days and show terminal and intermediate points to be served, with approximate mileage and general over-all distances. It eliminated, however, a rule that the maps also show all such points "new served by an carrier indicating by arrows the direction flown by such interconnecting services and stating their principal terminals."

Time-Saving—Considerable time-saving was expected to result from the change in the regulation on interventions (235.4). In the past, interveners sometimes came into cases hurriedly because they had

Spring and San Angelo. Tex. Other applicants for routes such as this are also in the air. The board American wants to fly from San Antonio to San Antonio, while Bestair Airways would go from El Paso to San Antonio via Marfa, Del Rio and Uvalde. These and other applicants are to be argued before the Board Sept. 8.

Continued—Already operating between El Paso and Hobbs, Connally also submitted other data, but the letters considered the major portion of its new memoranda, and then revealed how inadequately surface cameras are serving the important military area. This is believed to be the first time as many best commanding officers of the army have ever gone on record to urge commercial air service.

"At present the only air communications to the west from San Antonio via El Paso, Dallas or Fort Worth, and a transfer at one of these points to a westward bound plane," said commanding officers wrote. "This proposed line will also make military value."

Direct Lines—"At present," said another "it takes longer for an air mail letter to reach San Antonio than it does by straight mail service. If [the proposed line] would be of considerable benefit to the military service."

"It is extremely desirable that a direct line be available for travel of personnel and shipment of express," another wrote.

Currently available, direct airline connection between this vicinity and the San Antonio district would be of material aid toward forwarding the war effort. Reduced facilities to and from San Antonio are very limited here particularly during the summer months and causing much inconvenience to the expedition of official correspondents," said another.

Vital Needs—"In the operation of this type of Army activity, it is necessary that we have quick mail, passenger, and express transportation from San Antonio to Cadiz. We receive a large number of students from the Army Air Corps at Midland, Big Spring and San Angelo. The rail transportation between these cities and Cadiz is very bad. We have a train which operates not more than twice a week from Cadiz to Pecos, Tex., and passenger traffic is routed by bus to El Paso, thence to San Antonio and other cities," one officer said.

"This route is an excellent idea. It will materially help the movement of personnel in addition to mail.

Commanding officers are now urging telegrams and private planes because the existing air service is so bad."

The letters came from brigadier generals, major generals and colonels in charge of bases, schools, and other establishments.

MCA Asks Routes

To apply for more Midwest service, with extension to Atlanta

Mid-Continent Airlines has announced plans to file new applications for a route expansion program, seeking express for lines from Kansas City to St. Louis, Kansas City to Atlanta, Minneapolis-St. Paul to Chicago via Rochester, Minn., and Milwaukee; Minneapolis-St. Paul to St. Louis via Rochester, Wis., Waterloo, Cedar Rapids and Iowa City, Iowa, the Tri-Cities, Peoria and Springfield, Ill., and Tulsa to Dallas.

Routes—Already applied for are routes from St. Louis to Detroit via Fort Wayne, Ind., Minneapolis-St. Paul to Chicago via Rochester, Dubuque, Iowa, and Mackford, Ill., Tulsa to New Orleans, Minn., N. D., Regina, Canada, feeder routes serving 126 towns within and adjacent to its present territory, and intermediate stops on the route between Kansas City and Tulsa.

Airport Lounge Underway at Lockheed

Service women's aid results in new building at air terminal

What may develop into a nationwide answer to the crowding of domestic airport passenger terminals by military personnel awaiting plane connections is offered by Lockheed Air Terminal, Burbank.

Officers & Men Welcome—By September 8, a "Troops-in-Transit" waiting and recreation building, suggested by Vets Aircraft Corp.'s Blue Star Service Women and being built by Lockheed Air Terminal, Inc., will be open for officers and men and armed forces.

U.S.O. businesses will be present on 34-4r day.

Relaxed Waiting—"It will give service men, many forced to wait at air terminals over extended periods for travel orders, the relaxation that is impossible under present crowded conditions in air terminal passenger lobbies designed for rapidly moving peacetime patrons of airlines," says Dudley M. Steele, L.A.T. airport manager.

Domestic Carriers Study Feeder Idea

Airline policy group collecting data on servicing 5,000 communities throughout the U. S.

The 16 domestic airlines which signed a joint policy statement on international aviation in Washington last month probably will have something to say publicly soon about their domestic intentions.

Outlook—While they already are starting to file their service applications, the lines are collecting data and doing research on the home aviation outlook.

Feeder Lines—They may, in fact, outline plans to bring air transportation to more than 3,000 municipalities in this country with a liberal employment of the feeder service. Changes in the law will be presented individually by the lines, however, in their own areas.

Northeast Leads—In the meantime, Northwest Airlines has started the ball rolling again in the atmospheric window field by telling the Civil Aeronautics Board it would like to have a commercial air route to Tokyo, and on to Shanghai and Hong Kong.

Over Sea Route—American Airlines filed for a route to London, and Braniff Airways has indicated it will visit the board in another three weeks with applications for air cargo and freight routes to Europe, Central and South America, the Caribbean Islands, and the Panama Canal Zone.

More Planes To Bring Added Cargo Flights

Ray Grant, new Western Air Lines express chief, forecasts additional schedules

Ray Grant, newly appointed mail, express and traffic manager for Western Air Lines, believes that every airline in the country could operate all-cargo planes profitably and now, if given the equipment.

All-Cargo—Commenting on American Airlines' recently launched all-cargo transcontinental service, Grant said he believed all-cargo services will be started on virtually all lines upon the return to the industry of planes taken over by the Air Transport Commission.

Equipment Available—"We could probably would be operating so-called all-cargo flights today if Western could get the equipment," said Grant, "and such services are

needed even more by the transcontinental lines."

The return of planes to the airlines during the war, he added, would result amply in the return to airline passengers, priority and delivery of seats occupied with increasing frequency by piles of highly priority express packages and even large mail or packing cases.

Big Braniff Gains

July mail and express up over 100 percent from year ago. Stock overvalued.

Braniff Airways, in offering 600,000 shares of common stock at \$18.75 a share last week—one of the largest public financing moves in recent years by a domestic airline company—has reported increases in all lines of traffic for last July over the same month a year ago.

Mail and Express—Mail volume was up over 188 percent from 281,631 pounds to 522,598, while mail pounds a day increased from 70,939,990 to 206,960,416, or 188 percent. Express pound miles went from 20,750,900 to 73,551,638, a boost of 149 percent, and air express poundage was up 84 percent from 75,898 to 147,460.

Passenger Up—Service passengers amounted 48 percent from 23,451 to 34,622. Passenger miles operated were 6,225,566 in July, this year, compared with 3,517,375 in the 1942 month, a gain of 77 percent. Plane miles increased 34 percent, from 266,972 to 359,187.

Mail—Braniff shows fifth largest airline in the country, this carrier offered its stock through F. Eberstadt & Co. and expects to increase its capital funds for post-war expansion. The offering was oversubscribed. Of \$3,390,000 proceeds, about \$2,900,000 is to be used to purchase equipment for an indefinite continuing domestic route, \$1,000,000 for new equipment for a trade area feeder system, and \$1,890,000 for proposed foreign route operation, specific details yet to be decided.

NWA May Refinance

Croft Hamlin, president of Northwest Airlines, has let it be known the company is considering financing for expansion, and that stockholders may be asked at their next meeting for outside financing in maximum capitalization. Details were not disclosed.

NATS Flies 15,000 Passengers Monthly

Naval "airline" using about 100 transports, carrying cargo over globe

More than 100 two-engine and four-engine transports now fly cargo and personnel under the banner of the Naval Air Transport Service, which had less than ten planes before the war.

For the Fleet—NATS acts as a supplier for the fleet and at the moment flies some 60,000 miles to carry about 15,000 passengers and 1,500,000 pounds of cargo, including mail, a month. Cargo ton-miles average 3,000,000 each month. Although many of the personnel are former airline men, the NATS has routes not regulated, but anywhere a mission needs them—in any kind of weather conditions and with any level of the sea.

McCauley Comments—A compact group that functions as all bureau of the Navy, NATS was recently placed under direct command of Vice Adm. John B. McCauley, Deputy Chief of Naval Operations (Air). Until the recent reorganization, NATS was under Adm. Ernest King.

Chief of Naval Operations. A small staff of officers of the Aviation Section controls under the new set-up to function under Vice Adm. McCauley.

High Scores—Officials estimate that during June, 1943, NATS was flying a number of aircraft equal to approximately 40 percent of those employed by the commercial lines operating the year before in this country. Its plans show about 30 percent of the total ton-miles and lines flew. Of course, airlines are computed to carry 88 percent of their load as passengers, easy to load, whereas 65 percent of NATS loads are cargo and mail, more difficult to move aboard a ship.

Load and Sea—Both landplanes and flying boats are used in their operations, the numbers about equal. One fourth of the planes operate in this country while the rest fly the coasts of the world, often pulling into parts where airfields are impossible of handling large landplanes.

There are now eight transport squadrons activated within NATS and the Navy expects two more to be in existence by fall. Six of the present squadrons have airline pilots as squadron commanders including the vast experience needed for the operations of NATS.



NATS Serves Around the World: Naval Air Transport Service operates around the world, leading war cargo, medical supplies, important passengers, confidential reports, and U. S. mail by fast and safe and Naval establishments. It has even carried drivers of prisoners of war.

PERSONNEL

Washington Chapter of the National Office Management Assn. has elected:



1932 Lockheed was with Beard & Albany, specializing in aviation accounting.

R. G. Frey has been named assistant general plant manager by Sperry Gyroscope Co. He was formerly senior industrial specialist with the U. S. Dept. of Labor. J. J. Wilson, former assistant procurement manager at Sperry has been appointed general purchasing agent. Concurrently, R. V. Elms becoming purchasing agent in charge of raw materials and J. K. Walker purchasing agent for electrical materials.

Col William F. Norbeck, who was recently replaced by Col William Westlake as assistant to the director for AAF Bureau of Public Relations, has been assigned to the Third Air Force, Tampa, Fla. His exact assignment is not known in Washington.

Colonel Norbeck is sent back from Russia. He accompanied Capt. "Eddie" Rosenbaker on his recent mission to the Secretary of War.



WILSON VISITS FAIRCHILD AIRCRAFT:

On an eastern tour Charles Wilson, WPA vice-chairman, called at the Magnificent, Md., plant of Fairchild Aircraft. Left to right: B. J. Hoffines, personnel representative; Edward Place, editor of "Labor Management News"; Sherman M. Fairchild, chairman of Fairchild Engine & Airplane Corp.; Theodore Quinn, executive

Colonel Arthur Eakin, who headed public relations for General H. H. Arnold before the reorganization of the Public Relations Bureau, a Chief of the Air Station, Third Air Force.

Colvin A. Townsend, director of control administration, has been appointed assistant general manager of Aircraft Associates Corp. He was previously with the WPA in Washington and San Francisco, and previously was branch and district manager of Remington-Bond, Inc. for 30 years.



a period of nearly

Gilbert G. Bulwig (photo) has been named as president of Aircraft Corporation, Inc., to enter the Marine Corps aviation division, as a major in charge of administration, at the U. S. Marine Base, Cherry Pt., N. C. He was a flying instructor in World War I. He succeeded as president by William E. Jones, Jr., chairman of the board. Other officers are R. J. Seal executive vice-president, treasurer and general manager, Leonard George, vice-presi-

dent and legal counsel, and Wendell O'Hearn, secretary in charge of accounting.



THOMPSON HONORED:

Cyril C. Thompson, until known vice-president of United Air Lines, was awarded an honorary doctor of laws degree from Pomona College, Claremont, Calif. He is shown as he appeared at the ceremony.

dent and legal counsel, and Wendell O'Hearn, secretary in charge of accounting.

Capt. William M. Graham, Jr. has been appointed chief public relations officer of the Eastern Procurement Division, Army Air Force National Command, with headquarters in New York City. He was previously publications officer in the Bureau of Public Relations for the Army Air Force, before that chief of the Information Section, Headquarters and Education Branch, in the Publications Office in Washington. Before being commissioned a 2nd Lt. in the Air Corps

in February 1942, Capt. Graham was on the Aeronautical Division, and promotional research manager of Aviation, San Transportation and Travel Journal.

In the expansion of the traffic department of Continental Air Lines, three positions and transfers have been announced. Harry C. Gross, C.A.L. district traffic manager at Tulsa, was transferred to Denver as city traffic manager. He was succeeded by William G. Lawson, traffic representative in the Denver metropolitan office. Frank Wilson, also a traffic representative at Denver, was named district traffic manager at Wichita.

Ryan Aeronautical Co. announced that Nicholas C. Warren has joined the company as assistant to the chief engineer. Warren was formerly chief design engineer of Muesel Corp. in charge of mechanical design on 10,000-hp turbopropellers. He designed the fastest single-engine landplane ever built, completing his design in 37 days, instead of the usual 35 to 40 months required for that job. He has also held executive engineering positions with Pontiac Motors division of General Motors, Lockheed Aircraft Corp., W. A. Bechtel Co. and Calspan Engineering Co. He graduated from the U. S. Naval Academy in 1932 and did post-graduate work in aeronautical engineering in California Institute of Technology.

William Campbell, owner of auto thoroughbred Nebraska and Idaho, becomes newly appointed supervisor of restaurants for Western Air Lines that airline passengers are being better served than any other group of travelers. "Because their meals, like their rest space, are 'served' and can be planned well in advance," he explains. Campbell graduated from the University of Oklahoma in 1930 in business administration, and then found himself in the restaurant business with his father.



Thomson D. Brooks has been appointed superintendent of Maintenance at Chicago & Southern Air Lines' main overhaul base at Moline, succeeding Harold Foster. Brooks started his aviation career while in the U. S. Navy stationed at Quantico, Va. He has been with C. & S. for the past eight years in such capacities as instructor, mechanic, crew chief, and general superintendent of Modification and the Military Transport Division.

Sheldon and reservation managers of Pennsylvania-Central Airlines met recently for a two-day conference at Cleveland. Pictured among those who attended are, seated, left to right: R. P. Brinkley, assistant to president, E. C. Perry, C. E. Conroy, Mary E. McCormack, J. W. Stone, Fred Vrakel, Elmer Meadows, T. W. Preston, Charles Hunt. Standing, left to right: W. R. Monahan, superintendent of operations, Charles Kneble, superintendent of arrival and cargo, V. R. Stevens, D. C. Whit, W. C. Barnhart, J. Cochran, S. Clark, J. Murphy, K. W. Hendley, superintendent of stations, J. Roth, M. E. Cole, superintendent of reservations and C. J. Miller, Jr.



United Air Lines has named F. W. Wilson (left) insurance manager with headquarters at Chicago. He was formerly with the RHC as senior executive with the most substantial program and rubber reserve salver, before that with Adair & Hooper, London. A Laneberry Insurance Co. and the General Motors Acceptance Corp. He succeeded R. C. Thomas (right), who transferred to an executive job at United's San Francisco headquarters, after 12 years in insurance manager. Thomas was formerly with the Boeing Rivers at Seattle, a co-owner of United, and with the Wells Fargo Bank in San Francisco.

Doris M. Palmer, dean of engineering at the University of Toledo since 1934, has been appointed plant engineer at the American Propeller Corp., manufacturer of Airframe Corp. Previous to joining the University staff 16 years ago, Palmer was engineer in charge of construction by Westinghouse at Pittsburgh of electric locomotives for Japan and was assistant to the factory manager of the Spicer Manufacturing Co. A graduate of the University of Michigan in 1922, he is a member of



PCA HOLDS MANAGERS' MEETING:

Sheldon and reservation managers of Pennsylvania-Central Airlines met recently for a two-day conference at Cleveland. Pictured among those who attended are, seated, left to right: R. P. Brinkley, assistant to president, E. C. Perry, C. E. Conroy, Mary E. McCormack, J. W. Stone, Fred Vrakel, Elmer Meadows, T. W. Preston, Charles Hunt. Standing, left to right: W. R. Monahan, superintendent of operations, Charles Kneble, superintendent of arrival and cargo, V. R. Stevens, D. C. Whit, W. C. Barnhart, J. Cochran, S. Clark, J. Murphy, K. W. Hendley, superintendent of stations, J. Roth, M. E. Cole, superintendent of reservations and C. J. Miller, Jr.

a number of engineering societies, including the American Society of Mechanical Engineers.



Grady Wright, who has been named as president of the Scout model builder. This latest photo, taken at the home of the 72-year-old co-inventor of the airplane and first man to fly it, shows Mr. Wright still maintains an active interest in youth and new ideas. He continues work on several inventions.

Russell J. Smith (photo) has been appointed superintendent of passenger service for Western Air Lines, succeeding Hugh C. Lewis, who recently joined Mid-Continent Air Lines as general traffic manager with offices in Kansas City. Smith was formerly system reservations vice president of United Airlines and chief reservations superintendent with Transcontinental Airlines, and with Century Air Lines. He holds a master's degree from the Boeing School of Aeronautics. William Kravitz was named assistant to Smith at the general passenger offices in Burbank. He was formerly manager of passenger service in the San Luis Obispo office, station manager at Long Beach, Calif., and in the engineering department of Curtiss-Wright.



Edward A. Lewis has been appointed E. F. Lee (photo) director of design building and airports at its Chicago headquarters. Lewis had formerly been in charge of the military operations which United is conducting under contract for ATC, in which he will be succeeded by W. J. Adams, director of flight operations.

Mr. Gus Wilson H. Dunton has resigned from his position to become deputy commander in chief of the AAF Air Service Command with headquarters at Potomac Field near Dayton, Ohio. Dunton has been on sick leave since the past month and was awarded a leave of absence for the past month. He will be returning to duty on August 1, 1943.



Four executive changes have taken place at General Motors Corp. E. B. Noyd has been made general manager of the Allison division, Indianapolis, and E. C. Kresge, a vice-president, has been given a leave of absence from the Indianapolis post. C. B. Orban, former assistant to B. B. Egan, vice-president in charge of the general engine group, has been elected a vice-president of the company and will be in charge of the Allison division at Detroit. E. C. Kresge, a vice-president, has been transferred from La Grange to Detroit and will be assistant to E. B. Noyd, vice-president.

FINANCIAL

Analysis of Transcontinental Lines Shows Best Record Made by United

Important increases shown in all departments by Big Three carriers for first half of 1943, with express traffic leading.

By ROGER WILCO

Revised gains in all departments were reported during the first half of 1943 by the three transcontinental airlines—American, TWA and United, in the reports recently released for the records recently released.

Analysis.—Taken by themselves, the individual reports present a commendable showing. Greater significance, however, can be derived by a study of comparative performance as a relative basis. This study is presented in the accompanying tables and highlights a number of interesting results. At the outset, it must be recognized that while transcontinental in character, all three lines do not have identical operating conditions, but in general are more comparable than any other group.

Leaders.—While American continues to lead in the amount of passenger revenue reported, it made the greatest gain in that department, showing an improvement of 25 percent for the first six months of 1943 over the like period a year ago. TWA was up 14.5 percent while American gained 10.8 percent.

Express.—Percentage-wise, the improvement in express revenues was outstanding—ranging from 191 percent for American down to 11.6 percent for TWA. Express operations contribute very little in terms of total gross revenues but account for a far greater percentage of the net profits. This is due to the favorable conditions surrounding air express operations, including heavy loads at present. The leverage present is partly due to the existing terms of the contract with the Railway Express Agency. In simple terms, once the R.E.A. is reimbursed for out-of-pocket expenses, the air carriers retain the largest share of the gross revenues.

Reduced Rates.—With an 11 percent reduction in effect as of July 15 on express tariffs, the carriers will be successful less heavily stimulated during the second half. For exam-

ple, United estimated that had these reduced rates been in effect during the first half, express revenues would have been lower by about \$150,000 or roughly 13 percent of the total.

Operating Costs.—American reduced its operating expenses by a small margin while United was virtually unchanged with TWA up 11.8 percent. Sharply lower charges for depreciation, due to the smaller amount of planes in operation, accounted for these reduced total operating expenses.

Profits.—It is because of high load factors, and those reduced expenses or their failure to materialize in direct revenue, that airline operations have been so profitable.

United Makes Best Showing.—The net result of all these changes indicates that United made the most important gains in the first half of the year. Measured in terms of net profit before federal income taxes, United gained 162.1 percent, TWA, 113 percent and American 133.8 percent.

After federal taxes, United continued to retain the greatest share of its revenues for its stockholders. The increases in net profits after all taxes were United, 194 percent, TWA, 43.4 percent, and American, 12.8 percent.

Tax Predominant.—Federal income taxes continue to present a complicated predicament. American believes it is subject to excess profits taxes and accordingly set aside 70 percent of net for taxes. United, on the other hand, does not believe it is liable in this respect and secured its total federal income tax liability for the first six months at 45 percent of its gross revenue, a downward adjustment for the 50 percent used for the first quarter. TWA evidently is of the same view as United as to its tax liability.

Excess Profits.—The whole question as to the airlines' status on excess profits taxes is very much up

in the air. Thus far no clear cut definition or ruling has been forthcoming which can be accepted with finality. It is believed that only when the Internal Revenue Department reviews the carriers' tax returns and allows them in litigation will some basic principle be established.

The accompanying tables indicate significant changes in both assets and liabilities for the three carriers and are not repeated by further comment. The figures speak for themselves.

Tells All.—It is worth mentioning, however, on the basis of releases of these operating returns by the three carriers. As stated, United presented a complete, detailed account of its operations with ample, comparative data. Accompanying these figures was a concise, explanatory statement, not only summarizing the figures but also explaining the phases of the company's operations. All in all, it is a report that should be welcomed by any sophisticated stockholder who desires to keep abreast on the affairs of this company. One who may find disclosure of all pertinent information, good and bad, is highly desirable.

Ryan Reports

Net profit before imputation is 97c a share, or \$124,648.

Ryan Aeronautical Co., consolidated net profits for the company and its wholly owned subsidiaries for the eight months ended June 30 amounted to \$424,686 after provision

for estimated federal income taxes and excess profit taxes of \$4,516,670. Net profit per share was 97c in this period, and the provision for taxes was at the rate of \$3.69 per share. These profits are subject to renegotiation, President Ryan said.

Wright Income Up

Engine subsidiary of Curtiss-Wright doubled 1941 shipments.

Net income for Wright Aeronautical Corp. for 1942 was \$6,384,711, a percentage of 1.63 to sales, after revaluation, taxes and reserves, against \$10,255,874 net income for the previous year.

Vanhook Releases Figures.—Guy W. Vanhook, president of the corporation, in releasing the figures, said renegotiations for 1942 have been concluded with the local re-organization panel, but have not been fully approved by Washington. Federal income and excess profits taxes for the year amounted to \$5,019,104, to be reduced eventually by the post-war refund of \$4,822,000.

The report showed that shipments for the year were more than double for the previous year, amounting to \$446,545,575, as compared with \$206,345,990 in 1941 and \$67,537,213 in 1940.

Wright Power.—Vanhook pointed out that Wright Cyclone engines powered 30,000 planes. Fortified by North American Mitchell, Douglas Dauntless dive-bombers, Douglas B-24 attack planes, Lockheed Hud-

son, Grumman Avengers and other warplanes, and General Sherman and General Grant medium tanks and M-7 tank destroyers.

Willis Steps Up Aviation Operations

Report for nine months shows gain in production of assemblies and wings.

A great expansion of the aircraft division of Willis-O'Brien-Moses, Inc., is noted in a nine-month report, ending June 30, which said the firm was moving into volume production of landing gear assemblies for the Grumman Wildcat fighter and the center wing section of the Vought Corsair.

Tax Increase.—The statement reported sales at a new high of \$121,921,820 which was 75 percent above the volume of the previous year's period. Ward M. Canaday, chairman, and Joseph W. Fraser, president, said the company showed a consolidated net income of \$2,139,444 after providing \$14,121,000 for taxes and \$4,666,411 for reserves. The earnings are equivalent to 1.1 percent of the sales and compare with a net income of \$1,144,841 in the first nine months of the preceding fiscal year when taxes amounted to \$2,741,239.

COMPARATIVE OPERATING RESULTS

AMERICAN AIR LINES, INC. (Six Months Ended June 30, 1943)				TRANSCONTINENTAL & WESTERN AIR, INC. (Continued) (Six Months Ended June 30, 1943)			
Operating Revenues	Net Profit before Federal Income Taxes	Net Profit after Federal Income Taxes	Net Profit after Federal Income Taxes	Operating Revenues	Net Profit before Federal Income Taxes	Net Profit after Federal Income Taxes	Net Profit after Federal Income Taxes
\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Passenger	1,000,000	1,000,000	1,000,000	Passenger	1,000,000	1,000,000	1,000,000
Mail	1,000,000	1,000,000	1,000,000	Mail	1,000,000	1,000,000	1,000,000
Freight	1,000,000	1,000,000	1,000,000	Freight	1,000,000	1,000,000	1,000,000
Express	1,000,000	1,000,000	1,000,000	Express	1,000,000	1,000,000	1,000,000
Other	1,000,000	1,000,000	1,000,000	Other	1,000,000	1,000,000	1,000,000
Net Profit	1,000,000	1,000,000	1,000,000	Net Profit	1,000,000	1,000,000	1,000,000
Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses
Salaries	Salaries	Salaries	Salaries	Salaries	Salaries	Salaries	Salaries
Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation
Interest	Interest	Interest	Interest	Interest	Interest	Interest	Interest
Taxes	Taxes	Taxes	Taxes	Taxes	Taxes	Taxes	Taxes
Other	Other	Other	Other	Other	Other	Other	Other
Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit
Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses
Salaries	Salaries	Salaries	Salaries	Salaries	Salaries	Salaries	Salaries
Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation
Interest	Interest	Interest	Interest	Interest	Interest	Interest	Interest
Taxes	Taxes	Taxes	Taxes	Taxes	Taxes	Taxes	Taxes
Other	Other	Other	Other	Other	Other	Other	Other
Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit
Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses	Operating Expenses
Salaries	Salaries	Salaries	Salaries	Salaries	Salaries	Salaries	Salaries
Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation	Depreciation
Interest	Interest	Interest	Interest	Interest	Interest	Interest	Interest
Taxes	Taxes	Taxes	Taxes	Taxes	Taxes	Taxes	Taxes
Other	Other	Other	Other	Other	Other	Other	Other
Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit	Net Profit

More Authority Needed for Navy Aviation

RECENT REORGANIZATION of Naval aviation does not go far enough but it paves the way for other important reforms both in the Bureau of Aeronautics and in the Office of the Deputy Chief of Naval Operations for Air.

Most attention, naturally, has been given transfer of operations from the Bureau to the new Office, and speculation is rampant over the future relative positions in authority of the battleship sea dogs and top ranking aviators in combat. This matter is as intriguing as it is important, but there is further action which the Secretary should take at once to utilize the Naval air experts to the maximum.

The Bureau of Aeronautics' prime function under the reorganization is announced as the design and procurement of the finest fighting aircraft. Yet the air-minded public does not realize that in order to carry out this function the Bureau even yet is at the mercy of other non-aviation bureaus.

Aeronautics personnel, although responsible for most of the work involved in such vital questions as communications equipment and armament which goes into Navy planes, have only limited authority.

The Bureau of Ships still has the last word on types of rods installed and the Bureau of Ordnance is undisputed boss of aircraft armament. Thus, we see the same man who design and install 16 inch guns on a wallowing surface vessel having authority to override the recommendations of battle-

scored pilots, just back from fighting zones, on machine guns or aircraft cannon installations.

In fairness to these ship men it must be said that in recent months they have listened to Bureau of Aeronautics officials in many cases, but it is safe to say that our Navy aircraft would have had a better punch at war's outbreak if aviators had been in complete control of Naval aircraft procurement.

A similar control by ship men prevails even in the new air operations division. The reorganization announcement made the point that personnel functions were transferred from the Bureau of Aeronautics. This resulted in the general impression that such matters passed entirely to the newly promoted Admiral McCain. Here again, however, it is conservative non-aviators in the Bureau of Naval Personnel who control all personnel.

The reorganization, heralded by the Navy with pardonable fanfare, is a commendable beginning. But if Secretary Knows has the best interests of Naval aviation at heart, rather than a dominating fear of a separate air force which conceivably could take away some of his aviation prerogatives, he should strip the old-line bureaus of their authority over the air arm.

That, to quote the Navy Department's own press handout, would go much further to "increase the responsibility and autonomy of the aeronautics organization in procuring the finest aircraft types . . . so vitally important to the operations of the war."

Airline Passenger Service Problems

THE AIRLINES are doing a remarkable job, despite wartime difficulties, but there are becoming apparent to air travelers increasing delays and slip-ups affecting passenger relations which hint at the beginning of a breakdown in supervision on reservations and airport personnel.

Results of these oversights are confusion and delays far out of proportion to their cause. Apparently the fault lies not in the employee's original training for his job, but in seeing to it that he follows it.

Typical of comment by seasoned air travelers is the complaint that on several lines more passengers are permitted to get all the way to their plane than can be taken aboard. This results in delays up to 30 minutes while various lists are checked, all passengers interviewed, and the inevitable removal of the excess passengers, through no fault of theirs.

Errors by reservations people are growing, such as failure to inform the passenger he must report at a deadline or face cancellation, failure to record reservations after assuming the passenger he has space, and reserving space on wrong flights.

Delays in delivering baggage from planes, keeping airport limousines and taxis waiting 15 minutes or more, is now common. The catalog of delays could be continued.

Delays are expected at an airport, but objection of airline passengers is that most of the confusion appears to be result of curtailed supervision by perhaps one or two individuals rather than the result of problems inherent in war operations. The industry should make every effort to preserve its remarkable reputation for service to the traveling public. A little more attention by supervisory people to routine would have amazing results.

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